

Amendment and Response Under 37 C.F.R. 1.116

Applicant: Michael Bauer et al.

Serial No.: 10/565,259

Filed: January 19, 2006

Docket No.: 1431.145.101/FIN606PCT/US

Title: SUPPORT WITH SOLDER BALL ELEMENTS AND A METHOD FOR POPULATING SUBSTRATES WITH SOLDER BALLS

IN THE CLAIMS

Please cancel claims 1-30 and 37.

Please amend claim 31 as follows:

1.-30. (Cancelled)

31. (Currently Amended) A method for loading substrates with solder ball contacts, comprising:

producing a tape from support material with a layer of adhesive on one side, comprising a thermoplastic or thermosetting material, the adhesive force of which is reduced when irradiated;

attaching solder ball elements to the support material by arranging the solder ball elements in rows and columns on the layer of adhesive in a prescribed minimally permissible pitch for a semiconductor chip or for a semiconductor component;

loosening solder ball elements at prescribed first positions by selectively irradiating the support such that the prescribed first positions receive radiation and second positions do not receive radiation to reduce the adhesion of the layer of adhesive at only the prescribed first locations and loosen solder ball elements at prescribed positions;

removing the loosened solder ball elements and leaving solder ball elements that are fixed on the support material in an arrangement pattern for a semiconductor chip or for a semiconductor component;

soldering the solder ball elements remaining in a predetermined arrangement pattern on the support onto contact areas of a semiconductor wafer or semiconductor chip or wiring support for semiconductor components; and

pulling the support off the substrate to be loaded with flip-chip contacts or ball contacts.

Amendment and Response Under 37 C.F.R. 1.116

Applicant: Michael Bauer et al.

Serial No.: 10/565,259

Filed: January 19, 2006

Docket No.: 1431.145.101/FIN606PCT/US

Title: SUPPORT WITH SOLDER BALL ELEMENTS AND A METHOD FOR POPULATING SUBSTRATES WITH SOLDER BALLS

32. (Previously Presented) The method according to claim 31, comprising spraying the support on one side with a layer of adhesive.

33. (Previously Presented) The method according to claim 31, comprising adhesively attaching the solder ball elements onto the layer of adhesive in rows, from dispensing nozzles arranged in parallel next to one another, in a prescribed minimally permissible pitch for a semiconductor chip or a semiconductor component.

34. (Withdrawn) The method according to claim 31, comprising wherein a laser beam for selectively irradiating the support to reduce the adhesion of the layer of adhesive and to loosen solder ball elements at prescribed positions is passed over the support.

35. (Previously Presented) The method according to claim 31, comprising wherein the support is selectively irradiated with UV rays through a mask to reduce the adhesion of the layer of adhesive and to loosen solder ball elements at prescribed positions.

36. (Previously Presented) The method according to claim 31, comprising subjecting the support to irradiation over a large surface area, and the support is pulled off the ball contacts.

37. (Cancelled)